D.T.E. 01-42

Investigation by the Department of Telecommunications and Energy on its own motion as to the propriety of rates and charges as set forth in tariffs: M.D.T.E. Nos. 1 and 2, filed by Pinehills Water Company on April 13, 2001 to become effective May 1, 2001 and suspended for further investigation.

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FOR: PINEHILLS WATER COMPANY
Petitioner

I. INTRODUCTION

On April 13, 2001, Pinehills Water Company ("Pinehills" or "Company"), pursuant to G.L. c. 164, § 94 and G.L. c.165, § 2, filed with the Department of Telecommunications and Energy ("Department") initial rates and charges proposed to become effective May 1, 2001. Pinehills is a newly-created water utility intended to serve approximately 2,800 residential customers and approximately 1,300,000 square feet of general commercial and retail space in The Pinehills ("Community"), a mixed-use development in the Town of Plymouth, Massachusetts ("Plymouth"), being developed by Pinehills, LLC.[1] Once the Community is fully developed, the Company's proposed rates would generate annual revenues of $2,337,000[2] (Exh. PWC-5, exh. SBA-2). The petition was docketed as D.T.E. 01-42.

On October 23, 2001, the Department suspended the implementation of the proposed rates until December 1, 2001, pending an investigation as to their propriety.[3] The Department conducted a public hearing in Plymouth on June 16, 2001 to afford interested persons an opportunity to be heard. On that same day, representatives of the Department and Pinehills conducted a site visit of the Company's facilities. Because suspension of the Company's filing resulted in Pinehills's inability to charge for water service, the Department permitted the Company to implement interim rates, subject to refund if the Department's investigation concluded that the interim rates were in excess of the level of charges ultimately approved by

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1 Pinehills, LLC is a venture formed by the principals of New England Development, The Green Companies, and Wallace Associates (Exh. PWC-2, at 4; Tr. at 24-25).

2 This revenue requirement does not include $10,000 in miscellaneous revenues (Exh. PWC-5, exh. SBA-2).

3 An April 18, 2001 Order suspended the rates until November 1, 2001. The October 23, 2001 Order resuspended the rates until December 1, 2001.

the Department. Pinehills Water Company, D.T.E. 01-42, Interim Order at 3-4 (August 13, 2001).

On August 29, 2001, the Department held an evidentiary hearing at its offices in Boston. At the hearing, the Company presented two witnesses: Deborah Sedares, counsel and regulatory permit manager for Pinehills, LLC; and Stephen B. Alcott, a professional engineer for Alcott Associates. The record consists of 58 exhibits and responses to three record requests. Pinehills filed its brief on September 14, 2001.

II. ASSUMPTION OF BUILT-OUT SYSTEM

A. Introduction

The Community is being developed by Pinehills, LLC as an open space master planned mixed-use community covering 3,037 acres (Exh. PWC-2, at 4, 8). The ten-year development plan provides for a maximum of 1,934 limited occupancy community homes, 920 planned retirement homes, and 1,300,000 square feet of general commercial and retail space, including offices, hotels, conference centers, restaurants, and retail stores (Exh. PWC-2, at 5, 8). As a condition of the zoning permits granted by Plymouth, 70 percent of the total area will remain open space, providing for golf courses, roads and trails, agricultural use, conservation land, and recreational use (Exhs. PWC-2, at 5-6; DTE 1-4, att. A; DTE 1-11).

In order to serve its customers, the Company has installed two 140-foot gravel-packed wells, each with a safe yield of 2,680,000 gallons per day, a jockey pump presently being used to serve Pinehills, LLC's administrative offices, two 12,100-gallon hydropneumatic tanks, and 15,933 feet of water mains (Exhs. PWC-2, at 9, PWC-3, Water Master Plan at 3-4; DTE 1-20). As construction progresses, the Company anticipates that a booster pumping station and a 750,000 gallon storage tank will be added in 2003 and 2004, respectively, as well

as 42 additional miles of water mains (Exh. PWC-2, at 9-10).[4] Under the present construction schedule, the Community will be fully built-out by 2010 (Exh. PWC-4, at 4).

B. Company Proposal

Pinehills states that, unlike a situation where an existing utility is seeking a rate increase, as a company seeking initial rates, it has little or no historic data on which to base rates (Exh. PWC-4, at 6-7). Additionally, the Company argues that, although it has invested approximately $4,000,000 to date in its water operations, its revenues and customers are presently minimal (Exh. PWC-4, at 7). The Company states that it is unreasonable to require its initial customers to carry the full cost of the present construction (Exh. PWC-4, at 8). Therefore, for purposes of establishing initial rates, Pinehills has used projected customer numbers and plant costs at full build-out, which is expected to occur in 2010 (Exh. PWC-4, at 4, 7).

When designing its initial rates, the Company assumed a ten-year buildout for the Community (Exh. PWC-4, at 4, 8-9). The Company assumed all costs were in current dollars (i.e., no adjustment for inflation) in order to present a conservative revenue requirement (id. at 8; Exh. DTE 2-2). If the Company had used an inflation factor of 2.5 percent over the ten-year buildout period, its total revenue requirement would have increased from $2,347,000 to approximately $3,000,000 (Exhs. DTE 2-1; DTE 2-2). The Company states that, even using a conservative revenue requirement, its initial rates will not overcharge customers and will provide Pinehills with adequate compensation for its investment (Exh. PWC-4, at 8).

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[4] Upon completion of the storage tank in 2004, the hydropneumatic tanks will be taken out of service, but remain available as a backup (Exh. PWC-3, Water Master Plan at 6).

However, the Company states that it is likely to require future rate increases, perhaps within five years, to address the effects of inflation and actual experience (Exh. DTE 2-1).

In support of its proposed assumption of full build-out, Pinehills argues that the Department has endorsed an approach of determining rates for a start-up water system based on costs and revenues anticipated upon buildout (Company Brief at 6-7, citing Pond Properties, D.P.U. 90-91 (1990); Glacial Lake Charles Aquifer Water Company, D.P.U. 88-197 (1989)). Through this approach, the Company maintains that it will have an opportunity to cover its costs over the long-term while maintaining rates that are commensurate with those charged by other recently-created Massachusetts water systems (Company Brief at 6, citing D.P.U. 90-91 (1990); D.P.U. 88-197 (1989)).

C. Analysis and Findings

The Department has traditionally established rates on the basis of a historic test year with known and measurable changes to test year cost of service. Eastern Edison Company, D.P.U. 1580, at 13-14 (1984); see also Massachusetts Electric Company, D.P.U. 136, at 3 (1980). In this case, Pinehills is a newly-created water system that is in the process of developing its distribution system and customer base (Tr. at 15). Although the Company has installed $4,276,000 in water system infrastructure, only 21 customers are presently being served (Exh. PWC-5, exh. SBA-2, Sch. 6; Tr. at 10). Therefore, there is no operating or financial history on which to establish a revenue requirement.

Despite this lack of history, the Company is providing service to some customers and incurring associated expenses. A significant level of capital investment has been incurred to

date, which for reasons of efficiency and economies of scale had to be installed prior to the completion of a fully-developed system.[5]

In setting initial rates for new water systems associated with the construction of a planned community, such as a condominium complex or housing development, the Department's practice has been to establish rates on the assumption that the development is fully built-out. D.P.U. 88-197, at 6-7.[6] Pinehills' use of this method, including the assumption of current dollars during the build-out period, provides the early customers with an added level of protection against adverse rate consequences. In view of the recent formation of Pinehills, the express plans of Pinehills, LLC to construct a specific number of units under a particular timetable, and the constraints imposed by the lack of actual operating data, the Department will establish the Company's revenue requirement using the assumption that Pinehills' system has been fully constructed and occupied. D.P.U. 88-197, at 6-7. See also Butterworth Water Company, D.P.U. 85-152, at 12 (1987). In Pinehills' future rate proceedings, the Department will, to the extent possible during the Company's buildout period, apply traditional ratemaking principles in determining rates. Id. at 7.

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5 The Company notes that if its existing customer base were to bear all the costs of the present system, the required volumetric rate would be approximately $175.54 per thousand gallons (Exh. PWC-5, WP-6).

6 The Department has also applied a "resizing" adjustment, whereby the utility's rate base in the form of distribution mains was reduced so that existing customers paid only a pro rata share of the capital costs. High Wood Water Company, D.P.U. 18243, at 2-3 (1975). However, the nature of modern water utility investment, particularly treatment processes, renders a simple "resizing" adjustment difficult to perform. The assumption of a built-out system offers a more efficient and equitable solution.

III. RATE BASE

A. Company Proposal

1. Plant Investment

As of the end of 2000, the Company had in service $4,276,000 in plant investment, with another $19,174,000 projected to be installed at the end of the build-out period, for a total plant investment of $23,450,000 (Exh. PWC-5, exh. SBA-2, Sch. 6). Of this total plant, the Company anticipates that $11,253,000 in distribution mains, $683,000 in meters, and $236,000 in hydrants (for a total of $12,172,000) will be contributed to Pinehills by developers and carried on the Company's books as contributions in aid of construction ("CIAC") (Exhs. PWC-2, at 10; PWC-5, exh. SBA-2, Sch. 6; DTE 1-15).[7] Pinehills excluded this contributed property from plant investment for purposes of developing its initial rates (Exh. PWC-5, exh. SBA-1, Sch. 5). The remaining plant, consisting of pumping and storage facilities, transmission mains, and general equipment, will be owned by Pine Springs Realty, LLC ("Pine Springs"), and leased to the Company under the terms of a five-year operating lease (Exhs. PWC-2, at 10; PWC-5, exh. SBA-2, Sch. 6).[8]

2. Cash Working Capital

Companies require funds to pay for expenses incurred in the day-to-day course of business, including operating and maintenance ("O&M") expenses. These funds are provided either through funds generated internally by the Company or through short-term borrowing. The Department has found that a company is entitled to be reimbursed for the cost associated

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[7] The Company is in the process of developing an expanded version of the Department's required accounting system to keep track of contributed property (Tr. at 30-31).

[8] The Pine Springs lease is addressed in Section IV.A of this Order.

with the use of its funds or for the interest expense incurred on borrowing. Western Massachusetts Electric Company, D.P.U. 87-260, at 17. This reimbursement is accomplished by adding a working capital component to the company's rate base computation. Id.

Pinehills has proposed a total working capital expense of $55,000, based on a 45-day O&M working capital requirement (Exh. PWC-5, exh. SBA-2, Sch. 5). The Company has included its working capital allowance as a component of its leased plant expense (Exh. PWC-5, exh. SBA-2, Sch. 5).

B. Analysis and Findings

For ratemaking purposes, the Department determines rate base according to the cost of the utility's plant in service as of the end of the test year under a used and useful standard. In order to qualify for inclusion in rates, a utility's plant investment must be in service and providing benefits to customers. Boston Gas Company, D.P.U. 96-50, at 15 (1996); Western Massachusetts Electric Company, D.P.U. 85-270, at 60 (1986).

In Section II, above, the Department accepted Pinehills' proposal to set initial rates on the basis of a fully built-out system. This requires the inclusion of projected plant in the Company's rate base. While the Department has accepted the Company's proposed inclusion of projected plant items for the purpose of setting Pinehills' initial rates, the Department has made no findings - nor can such findings be made - with respect to the prudency of the projected investments. Therefore, our inclusion of projected plant for the purpose of setting the Company's initial rates does not preclude the Department from later examining the prudence of the Company's future capital investments. See Boston Gas Company, D.P.U. 93-60, at 14-36 (1993); Berkshire Gas Company, D.P.U. 92-210-B at 19-24 (1993). Accordingly, the

Department may, as part of a future rate proceeding, examine the prudence of the Company's post-2000 capital expenditures, whether that plant is directly owned or leased by Pinehills.

IV. EXPENSES

A. Lease Expense

1. Company Proposal

The Company has entered into an operating lease with Pine Springs for a substantial portion of its water distribution assets (Exhs. PWC-2, at 11; DTE 2-5). Under the lease, the Company has the right to use a maximum of $11,256,000 in Pine Spring's present and planned water supply and distribution facilities (Exh. DTE 1-18, at 8).[9] The initial term of the lease is five years, and it is thereafter renewable for an unlimited number of successive five-year periods (Exh. DTE 1-18, at 8, 20). The lease also provides Pinehills with the option to purchase the facilities at their depreciated book value during a three-month option period that commences six months prior to the expiration of the lease (including any renewal terms) (Exhs DTE 1-18, at 20; DTE 2-5).

There are two components to the annual rent paid by Pinehills to Pine Springs; basic rent and additional rent. Basic rent is a semi-annual variable charge intended to cover the

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[9] Any capital improvements exceeding this level would be paid for by the Company and then contributed to Pine Springs (Exh. DTE 1-18, at 8). Additionally, the Company may, at its own expense, make additional modifications to the leased facilities as either required by governmental authority or otherwise deemed necessary (id. at 9).

capital and related costs of Pine Springs.[10] Additional rent is defined as any other charges imposed over and above the basic rent component, including repairs, late payment penalties, and interest (Exh. DTE 1-18, at 9).

If Pinehills lacks sufficient revenue in a billing period to pay its O&M expense, administrative and general expenses, and local taxes, the basic rent would be reduced to the Company's collected revenues less expenses (Exh. DTE 1-18, at 31). In this event, a deferred charge component is applied, representing the difference between the contracted base rent and the base rent actually paid by the Company, with a carrying charge equal to 10.75 percent (id. at 32). Based on current consumption and capital cost estimates, Pinehills projects that the annual lease expense will be zero for the years 2001 through 2003, and increase thereafter from $264,000 in 2004 to $1,633,000 in 2010 (Exh. PWC-5, exh. SBA-3).

The Company states that, under financial accounting requirements, the lease is defined as an operating lease (Exh. DTE 2-5; Tr. at 60-61). An operating lease represents a contract that does not result in an asset or liability being incorporated on the lessee's balance sheets. In contrast, a capital lease is included on the lessee's balance sheet as both an asset and a

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[10] The basic rent formula is determined as follows:

Semi-Annual Lease Payment = [(ACC ÷ EC) x AC] + DC

In this formula, ACC represents actual capital costs, as described below, EC represents estimated metered consumption at buildout, i.e., 170.3 million gallons per year, AC represents actual metered consumption for the billing period, and DC represents deferred charges, as described below (Exh. DTE 1-18, at 31). The ACC component is derived by multiplying an annual return on investment of 10.75 percent by Pine Spring's net capital investment, and adding to that product both a composite plant-specific depreciation accrual rate and an allowance for income taxes (Exhs. DTE 1-18, at 31; DTE 2-25).

corresponding liability at the inception of the lease. See Massachusetts-American Water Company, D.T.E. 95-118, at 61 n.36 (1996).

Pinehills argues that the operating lease arrangement benefits customers in several ways. First, the Company argues that the lease facilitates the separation of water utility costs from the real estate activities of the Company's owners (Company Brief at 9). Second, Pinehills contends that the lease is structured in such a way as to mitigate rate impacts on customers, particularly those customers who enter the system during the early years of the project buildout (Company Brief at 9). Finally, Pinehills maintains that, because its owners are a potential source of capital to the Company, the tax provisions of the lease[11] facilitate lower capital costs to the Company's owners, thereby providing potential cost savings to Pinehills (Company Brief at 9-10). The Company also argues that an operating lease provides Pinehills with more operating flexibility and financial stability than a capital lease, due to the potential variation in lease factors that could arise during the buildout period, such as assumptions about construction costs and customer growth (Tr. at 60-61).

2. Analysis and Findings

The Department favors approaches to financing facilities that mitigate adverse rate effects on ratepayers. D.P.U. 95-118, at 73 (1996). The propriety and usefulness of a financing arrangement is specific to each situation and must be reviewed individually based on the specific circumstances presented. Id.; see also Harbor Electric Energy Company,

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[11] The lease agreement requires the Company to file income tax returns on a stand-alone basis (Exh. DTE 1-18, at 13; Tr. at 58-59). The Company represents that this approach allows tax savings to be applied to Pinehills and its affiliates on the basis of which entity is in the best position to take advantage of those savings (Company Brief at 9-10).

D.P.U. 89-220, at 9 (1990). Here, Pinehills proposed a lease transaction with an affiliate, Pine Springs, as a way to mitigate rate effects on the Company's ratepayers during the build-out period.

The Department has authority to inquire into transactions among affiliated companies under G.L. c. 165, § 4 and G.L. c. 164, § 85.[12] D.T.E. 95-118, at 74. Transactions with affiliates are subject to a greater level of scrutiny than would be the case if the utility dealt with all parties at arms' length. Id. See Hingham Water Company, D.P.U. 88-170, at 21 (1989); Housatonic Water Works Company, D.P.U. 86-93, at 18 (1987).

The Company and Pine Springs are subsidiaries of Pinehills, LLC (Exh. DTE 1-2). Therefore, Pinehills and Pine Springs are affiliates as defined by G.L. c. 164, § 85. As such, the Department will examine the transactions between Pine Springs and the Company, including the lease, with a greater level of scrutiny to assess whether the transaction jeopardizes ratepayers' interests. The lease with Pine Springs provides a mechanism to ensure that customers who connect to the Company's system in the early years of build-out do not

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[12] Under G.L. c. 164, § 85, an affiliated company is defined as

> [A]ny corporation, society, trust, association, partnership, or individual (a) controlling a company subject to this chapter, either directly, by ownership of a majority of its voting stock or of such minority thereof as to give it substantial control of such company, or indirectly, by ownership of such a majority or minority of the voting stock of another corporation or association so controlling such company; or (b) so controlled by a corporation, society, trust, association, partnership, or individual controlling as aforesaid, directly or indirectly, a company subject to this chapter; or (c) standing in such a relation to a company subject to this chapter that there is an absence of equal bargaining power between the corporation, society, trust, association, partnership or individual and the company so subject, in respect to their dealings and transactions.

subsidize customers added in later years (Exhs. PWC-4, at 11-12; DTE 1-17; DTE 2-25). Additionally, the lease is structured in a way that is consistent with the Department's ratemaking practices which are applied to directly-owned utility plant. The lease also facilitates the tracking of the Company's cost separate from those of the owners' real estate interests, thereby reducing the risk of cross-subsidization by water ratepayers (Exh. PWC-4, at 11; Tr. at 32-33). Finally, the lease provides that if Pinehills were to cease operations, Pine Springs would resume control over the leased assets and take responsibility for providing continued service to the Company's customers (Exh. DTE 1-18, at 12). Therefore, the lease ensures continuation of service to customers.

The lease terms require the Company to pay a return on investment of 10.75 percent, which Pinehills has represented to be consistent with its intent to derive a lease charge in a manner consistent with the expense it would have incurred had the Company directly owned the leased plant (Exhs. PWC-4, at 10-11, exh. SBA-3; DTE 1-18, at 31; DTE 2-25). As discussed in Section V.E. below, Pinehills' approved rate of return of is 10.25 percent. Therefore, the existing lease overstates the cost of capital to Pinehills, and could represent a subsidy to Pine Springs by the Company. Also, future events such as those affecting the Company's ability to access the capital markets and the construction schedule for the Community, may have an effect on the propriety of the rate of return provided for in the lease. These events would be especially significant if Pinehills were to seek additional rate relief during the five-year initial term of the lease. In order to ensure that Pinehills' ratepayers are not required to subsidize the capital costs of Pine Springs, Pinehills is directed to revise the Facilities Lease Agreement so that the return on investment is equal to the overall rate of return

as approved from time to time by the Department.[13] Satisfaction of this condition will result in final approval of the Facilities Lease Agreement. See Boston Edison Company/BEC Energy Company, D.P.U./D.T.E. 97-63, at 68 (1998).

B. Third-Party Service Providers

1. Company Proposal

Pinehills has entered into an agreement with Horsley & Witten, Inc., Environmental Services ("Horsley & Witten") to provide consulting engineering services to the Company for services related to the operation of the water system (Exh. DTE 1-21). The Company has also relied on the Sarian Company, Inc. ("Sarian") as its certified water operator since October 2000 (id.; Tr. at 39). The contract for Sarian's services was renewed on June 30, 2001 at an annual estimated cost of $118,500 through June 30, 2002, and $121,000 per year thereafter (id.). The Company testified that Sarian has been certified by the Department of Environmental Protection ("DEP") to operate a water utility in Massachusetts (Tr. at 50). In addition, Pinehills is currently in negotiations with USI Utility Group ("USI") to provide for the installation, maintenance, repair, replacement, reading, and testing of meters for the Company (Exh. DTE 1-21). The Company testified that USI is likely to also provide billing services to Pinehills when the Company reaches a "critical mass" of customers (Tr. at 48).

2. Analysis and Findings

The Company has executed contracts with both Sarian and Horsley & Witten (Exh. DTE 1-21). While Pinehills does not have a contract with USI, the Company is currently in negotiations with USI for its services (id.). The Company put its meter-related

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[13] As noted above, the present rate of return would be 10.25 percent.

services out to bid and USI submitted the least-cost bid (Tr. at 48-49; RR-DTE-2). Therefore, these expenses constitute a known and measurable change to the Company's test year cost of service. Accordingly, Pinehills' proposed expenses for third-party service providers will be included in the Company's cost of service.

In the case of small water companies, an extensive reliance on direct employees may result in payroll costs that are disproportionate to the needs of the utility. See Dover Water Company, D.P.U. 19565, at 8-9 (1979). In this case, the Company has evaluated its day-to-day operating requirements and entered into agreements to address those considerations. Considering Pinehills' small customer base[14] and our review of the Company's decision-making process, the Department finds that the Company has acted prudently and reasonably in relying on third-party service providers. However, the Company should review this policy as the customer base at Pinehills grows, in order to ensure that this method of meeting operational requirements continues to provide the most cost-effective means of providing service to ratepayers.

C. Rate Case Expense

1. Company Proposal

In its initial filing, the Company proposed an estimated rate case expense of $60,000 to be normalized over three years, resulting in an annualized expense of $20,000 (Exh. DTE 2-15, Workpaper 3, at 2). As of July 31, 2001, the Company states that it had incurred $90,000 in rate case expenses (RR-DTE-3). However, the Company does not seek to amend its rate proposal to include the additional expense (id.). Pinehills contends that its

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[14] Pinehills had 21 customers as of August 29, 2001 (Tr. at 9-10).

proposed treatment of rate case expense provides further assurance that its projected costs are conservative (id.).

2. Analysis and Findings

A company's rate case expense is a periodically recurring expense. Fitchburg Gas and Electric Light Company, D.P.U. 1270/1414, at 37 (1983). Therefore, it is necessary to normalize this expense so that only a representative annual amount of the cost of a rate case is included in the cost of service. To determine the appropriate normalization period, the Department averages the length of the intervals between the filing dates of a company's last four rate case filings, including the current rate case, rounded to the nearest whole year. In instances where there is no recent history of rate case filings, the Department will determine an appropriate normalization period based on the facts of a particular case. Berkshire Gas Company, D.P.U. 1490, at 34 (1983) ("Berkshire").

Based on the scope of Pinehills' initial filing, which required a greater level of supporting information than would normally be found in a petition by an established utility, as well as the characteristics of the discovery which the Company received, Pinehills has established that its proposed rate case expense of $60,000 is reasonable and commensurate with the level of legal and rate work provided. Therefore, the Department will allow the recovery of $60,000 in rate case expense in the Company's cost of service.

Concerning the normalization period, Pinehills is a newly-formed water company seeking initial rates. Therefore, there is no past history of rate filings on which to apply the Berkshire standard. The Department must determine an appropriate normalization period based on the facts of this partial case. Pinehills testified that will likely be required to file another rate case within five years (Exh. DTE 2-1). Based on the likelihood that the Company may seek

additional rate relief within five years, we find that a normalization period of five years is reasonable (Tr. at 61). When the Company's rate case expense of $60,000 is normalized over five years, the annual normalization is $12,000. Accordingly, the Department will include $12,000 in rate case expense as part of Pinehills' cost of service.

D. Depreciation Expense

1. Company Proposal

The Company proposed an annual depreciation expense of $205,000, to be included as a component of its lease expense (Exh. PWC-5, exh. SBA-2, Sch. 3).[15] This total depreciation expense was derived by taking the Company's total projected plant investment of $10,578,000 and applying unit depreciation rates to each category of plant investment (id.). This calculation results in a composite depreciation rate of 1.94 percent (id.)

The Company proposed the use of the following annual accrual rates:

Source of Water Supply - Wells	2.00 percent
Pump Station Building and Fixtures	2.00 percent
Reservoirs and Standpipes	2.00 percent
Pumping Plant Equipment	4.00 percent
Purification System	10.00 percent
Primary Mains	1.30 percent
Secondary Mains	1.30 percent
Customer's Meters/Measure Devices	10.00 percent
Hydrants	2.00 percent
Office Equipment	10.00 percent
Laboratory Equipment	10.00 percent

(Exh. PWC-5, exh. SBA-2, Sch. 3)

The Company states that these accrual rates were selected based on the witness's prior experience and the rates used by other water companies (Tr. at 27-28). In addition, the

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[15] See Section IV.A.1, above.

Company claims that these rates are within the range recommended by the National Association of Regulatory Utility Commissioners for small water utilities (id., citing "Depreciation Practices for Small Water Utilities," issued on August 15, 1979 ("NARUC Study").

2. Analysis and Findings

In the case of small water companies, the Department has previously relied on the depreciation guidelines set forth by the NARUC Study. Westport Harbor Aqueduct Company, D.P.U. 85-107, at 7 (1985); Milford Water Company, D.P.U. 84-135, at 22-24 (1985). The Department has examined the Company's proposed accrual rates, and finds Pinehills' depreciation rates are consistent with those contained in the NARUC Study. Further, the Department finds that these proposed rates are consistent with the depreciation rates used by other small utilities. Assabet Water Company, D.P.U. 95-92, at 17 (1996). Accordingly, the Department finds that the proposed accrual rates for these items are reasonable. The application of the accrual rates established above to the Company's respective plant accounts produces an overall depreciation expense of $205,000.

V. RATE OF RETURN

A. Introduction

In its initial filing, Pinehills proposed a return component of $1,218,000, based on a proposed rate of return of 10.75 percent applied to the pro forma rate base component of its lease with Pine Springs of $11,333,000 (Exhs. PWC-4, at 12; PWC-5, Sch. 5). A utility's rate of return is derived from the cost of the components included in its capital structure, which normally consists of long-term debt, preferred stock, and common equity. D.P.U. 95-92, at 31 (1996). The weighted average of these costs is then applied to the utility's rate base to yield a revenue component which would be collected from a utility's customers. D.P.U. 95-92, at 31

(1996); Kings Grant Water Company, D.P.U. 87-228, at 22 (1988); South Egremont Water Company, D.P.U. 86-149, at 5 (1987).

B. Capital Structure

The Company has proposed a hypothetical capital structure of 50 percent debt and 50 percent equity (Exhs. PWC-4, at 12; PWC-5, Sch. 5). The Company currently has neither outstanding equity nor long-term debt, but assumed this debt-to-equity ratio for the purposes of setting its initial rates (Exh. PWC-4, at 12; Tr. at 22-26).

The Department's policy in reviewing and applying utility company capital structure seeks, inter alia, to protect ratepayers from the effects of excessive rates of return. D.P.U. 95-92, at 33 (1996). In addition, when a capital structure deviates substantially from sound and well-established utility practice, the Department has imposed a hypothetical capital structure of 50 percent debt and 50 percent equity for ratemaking purposes. D.P.U. 95-92, at 33 (1996); Kings Grant Water Company, D.P.U. 91-252, at 17 (1992); Wylde Wood Water Works, D.P.U. 86-93, at 23 (1987); Blackstone Gas Company, D.P.U. 1135, at 4 (1982). In the instant case, we find that the Company's hypothetical capital structure is a reasonable approach that would fairly replicate its capitalization upon the issuance of permanent securities. Therefore, we will impute to Pinehills for ratemaking purposes a capital structure of 50 percent debt and 50 percent equity.

C. Cost of Debt

Pinehills has proposed a ten percent cost of debt in its hypothetical capital structure (Exh. PWC-4, at 12). The Company argues that this is a reasonable assumption of what it would cost Pinehills to secure long-term debt, particularly because the Company does not plan to obtain long-term financing for some time (Exh. PWC-4, at 12; Tr. at 25). Pinehills contends

that this cost of debt is also reasonable in light of the Company's status as a startup whose source of funds is its parent real estate development company (Company Brief at 5). The Company states that it will be appropriate to reset its rates if it were to secure long-term debt at some rate other than ten percent (Tr. at 25).

No recent long-term financings by Massachusetts water companies have resulted in a long-term debt rate at the level proposed by the Company. See Sheffield Water Company, D.T.E. 00-75, at 3 (2001) (long-term debt secured at 9.5 percent); East Northfield Water Company, D.P.U./D.T.E. 97-36, at 3 (1997) (long-term debt secured at 7.5 percent); Housatonic Water Works Company, D.P.U. 96-56, at 3 (1996) (long-term debt secured at 9.41 percent). In addition, long-term interest rates are currently at historical lows.[16] Based on these considerations, we conclude that the Company's proposed cost of debt is not commensurate with that of other investor-owned utilities of comparable size and capital structures. Taking into account the experience of other small water systems in financing their capital needs, the Company's indirect access to the capital markets through Pinehills, LLC, and current interest rates, the Department considers a cost of debt of nine percent to be reasonable and commensurate with the risks that a lender would incur. Accordingly, the Department shall use a debt rate of nine percent for ratemaking purposes.

D. Return on Common Equity

Pinehills has requested a return on equity of 11.5 percent based on the Department's optional formula for return on equity for water companies, pursuant to 220 C.M.R. § 31.00 (Exh. PWC-4, at 12). In Generic Cost of Equity for Water Companies, D.P.U. 85-115

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[16] See Federal Reserve Statistical Release, Publication H-15(519), "Selected Interest Rates," issue dated November 19, 2001.

(1985), the Department established an optional formula for determining the allowed rate of return on equity for water companies subject to the Department's jurisdiction. This formula was modified in Optional Formula for Determining Allowed Rates of Return on Equity for Water Companies, D.P.U. 96-90-A (1997). For a utility with a capital structure with between 25 percent and 75 percent common equity (as is the case with the hypothetical capital structure being applied to Pinehills) the allowed rate of return on common equity under the optional formula is equal to the twelve-month average of thirty-year United States Treasury bond yields, including the interest rate published on, or as close as possible after, a date four months following the effective date of the rates, plus three percentage points. 220 C.M.R. § 31.03. The regulations provide a minimum return of 11.5 percent, and a maximum return of 14.5 percent. Id. If a utility elects this method, it is deemed to have presented a prima facie case concerning the allowed return on equity and to have established a rebuttable presumption that the application of the formula results in a fair and reasonable allowed return on equity. 220 C.M.R. § 31.02.

The Department's review of current and historical Treasury bond yields indicates that the Company is entitled to the established minimum rate of 11.5 percent. See Federal Reserve Statistical Release, Publication H-15(519), "Selected Interest Rates," issues dated September 5, 2000 through September 4, 2001. Accordingly, the Department finds that a rate of return on common equity of 11.5 percent is reasonable.

E. Conclusion

Based on the analysis above, the weighted average cost of capital for Pinehills is 10.25 percent.[17] Accordingly, the Department finds that the Company's required rate of return is 10.25 percent.

VI. COST ALLOCATION AND RATE STRUCTURE

A. Introduction

A utility's rate structure comprises the level and pattern of prices charged to specific customers for the use of a utility's services. D.P.U. 95-92, at 35 (1996); Salisbury Water Supply Company, D.P.U. 87-215, at 16-17 (1988); Colonial Gas Company, D.P.U. 84-94, at 66-73 (1984). The specific rate structure of each rate class is a function of the cost to the utility of providing service to that rate class and of the design of rates calculated to cover that cost. D.P.U. 84-94, at 70 (1984). The Department has developed certain goals for utility rate structures. These goals include efficiency, simplicity, continuity, fairness, and earnings stability. Id. at 66.

B. Company Proposal

In estimating total billing consumption, the Company assumed that because the Community is designed as a retirement and limited occupancy community, each residential occupant will use 75 gallons per day, or 7,000 gallons per quarter (Exhs. PWC-5, exh. SBA-1, Sch. 2; DTE 2-12). Pinehills estimated that, based on projected commercial development and demand factors commonly used for planning purposes, the average commercial customer will use 96,500 gallons per quarter (Exhs. PWC-5, exh. SBA-1, Sch. 2; DTE 2-13). The Company also estimated that, based on information from the hotel chain, the proposed

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[17] (9.00 percent x 50 percent debt) + (11.5 percent ROE x 50 percent equity).

hotel/convention center will use 50,000 gallons per day, or 4,500,000 gallons per quarter (Exh. PWC-5, exh. SBA-1, Sch. 2; DTE 2-14). Based on these projected data, the Company estimated a total annual consumption of 170 million gallons (Exh. PWC-5, Workpaper 2).

Having determined its annual system consumption, Pinehills next allocated its revenue requirement between metered service and fire protection service (Exh. PWC-4 at 15). The Company argues that, for a water utility the size of Pinehills, metered service and fire protection rates should be designed such that approximately 21.5 percent of total costs should be attributed to fire protection service (Exhs. PWC-5, exh. SBA-1, Sch. 3, at 1, citing American Water Works Association's Manual of Water Supply Practices, "Principles of Water Rates, Fees, and Charges" ("M-1 Manual"); Exh. DTE 2-7).[18] Consistent with this standard, the Company assigned $502,000 in total revenue requirement to fire protection service (Exhs. PWC-4, exh. SBA-1, Sch. 3, at 1-2). Pinehills further separated its fire protection revenues between public and private fire protection, on the basis of equivalent capacity units (Exh. PWC-4, exh. SBA-1, Sch. 3, at 2). This allocation method results in a proposed public fire protection service charge of $40 per quarter to be billed to all customers, and private fire service charges billed on the basis of service connections.[19] Although the Company's cost analysis indicates that private fire service rates should be twice the proposed level, Pinehills

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[18] The M-1 Manual describes a fire protection allocation method which can be used as an alternative to an allocated cost of service study. The method relies on a mathematical relationship between customer numbers and the percentage of total costs allocable to fire protection service (Exh. PWC-5, exh. SBA-1, Sch. 3, at 1, n.1).

[19] For example, private fire service charges range between $260 per quarter for a 5/8-inch service connection and $2,340 per quarter for an 8-inch service connection, and $390 per quarter for private hydrants (Exh. PWC-1, M.D.T.E. No. 2, Original Sheets 2, 3; PWC-4, at 14, exh. SBA-1, Sch. 3, at 2).

states that it reduced these rates to avoid discouraging private fire protection service and to avoid relying on anticipated revenues from an optional service that may have no customers (Tr. at 53, 55-56).

For metered service, Pinehills has proposed a base charge that varies by meter size.[20] The Company has proposed a single-block volumetric rate of $8.00 per thousand gallons (Exhs. PWC-1, M.D.T.E. No. 2, Original Sheet 1; PWC-4, at 14). According to the Company, its base charges are designed to collect 25 percent of costs associated with metered service, with the remaining 75 percent covered by the volumetric rate (Exh. PWC-4, at 15).

Pinehills argues that its cost allocation and rate design proposal produces a reasonable allocation of costs to various services on the basis of cost causation, in a manner that best provides for an opportunity to recover those costs (Company Brief at 8-9). The Company maintains that its allocation between metered service and fire protection service is based on industry experience that approximately 20 percent of a water company's total charges should be derived from fire protection service (Company Brief at 8). With respect to its metered rate design, the Company contends that, in light of the extent of fixed costs and the expectation that the Community would have a sizable seasonal customer base, the proposed base meter charge is in line with similar companies in Massachusetts and will collect a reasonable percentage of Pinehills' total revenue requirement (Company Brief at 8, citing Exh. PWC-4, at 10). In support of its public fire protection charge, the Company explains that during the permitting process for the Community, the Town of Plymouth stated that it would not pay for public fire

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[20] Proposed base charges range from $40 per quarter for a 5/8-inch meter to $3,200 per quarter for an 8-inch meter (Exhs. PWC-1, M.D.T.E. No. 2, Original Sheet 1; PWC-4, at 14).

protection charges (Exh. DTE 2-4). Pinehills argues that, as compared to other alternatives, such as billing the Pinehills Landowners Association[21] or creating a fire district, its proposal to directly bill public fire protection charges to customers represents the most efficient solution (Exh. DTE 2-4).

C. Analysis and Findings

The Company has presented a comprehensive analysis of its anticipated system consumption, which considers both industry design standards and the particular customer characteristics of the Community (Exhs. DTE 2-12, DTE 2-13, DTE 2-14; Tr. at 15-16). Therefore, the Department finds that the Company's estimated annual consumption at build-out of 170 million gallons represents a reasonable measure of consumption. Accordingly, the Department will determine the Company's proposed cost allocation and rate design on the basis of these consumption estimates.

Turning to the Company's proposed cost allocation, an allocated cost of service study ("COSS") is designed to allocate a company's total revenue requirement to each of its rate classes, including metered service and fire protection service, based on that class' responsibility for those expenses. With the total allocation for each class representing the cost of serving each class, an approved COSS represents the best method available to allocate these costs between classes. D.P.U. 95-118, at 152 (1996). Nevertheless, there are significant costs associated with preparing a COSS, particularly in the case of a small water utility. See D.P.U. 86-149, at 7-8 (1986). An added complication is that Pinehills is in the early stages of development and

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[21] The Pinehills Landowners Association is responsible for the maintenance of common ownership areas within the Community, and would assess its members based on percentage of ownership or voting rights in the association (Tr. at 36-37).

has only recently begun providing service. Consequently, the Company does not possess the type of information that would customarily be used in an allocated COSS, including average-day, peak-day, and peak-hour demand information. Under these conditions, it is appropriate to examine other cost allocation techniques.

The M-1 Manual is a generally-accepted reference work within the water industry.[22] In the absence of a fully allocated COSS and actual consumption data for Pinehills, the Department finds that the cost allocation method described in the M-1 Manual is an easily-understood and reasonable basis for allocating the Company's costs between metered service and fire protection service. Accordingly, the Department accepts the Company's proposed allocation of 21.5 percent of its total revenue requirement to fire protection service.[23]

With respect to the Company's proposed metered service rates, the majority of Pinehills' system demand will come from residential users, with significant commercial use including a large hotel/convention center (Exh. PWC-5, Workpaper 2). As a condition of the Company's water withdrawal permits, DEP has prohibited the Company from adopting a declining block rate structure (Exh. PWC-3, Water Withdrawal Permit dated June 16, 1999, at 4). In view of the anticipated customer mix and the lack of actual system demand data, the use of a customer charge and single-block volumetric rate in this case provides the most efficient and equitable rate structure. See D.P.U. 87-215, at 21 (1988). The Department accepts the Company's

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22 The Department takes administrative notice of the most recent edition of the M1 Manual, specifically, "Principles of Water Rates, Fees, and Charges," American Water Works Association, 5th Ed. (2000). 220 C.M.R. § 1.10(3).

23 As Pinehills' customer base increases and consumption data become available, other cost allocation methods may be more appropriate. The Department may revisit the Company's cost allocation method as part of a future rate proceeding.

proposal to collect 25 percent of its metered service revenues through its base charges as a balance between cost causation, revenue stability, and resulting rate levels. Accordingly, the Company is directed to submit rates that collect 75 percent of its metered service revenue requirement of $2,282,681 (Schedule 1, attached) through a single-block volumetric rate, with the remaining portion to be collected through a series of customer charges that vary by meter size. If there is any metered service revenue surplus or shortfall that results from the use of this method, Pinehills may reconcile this through the customer charges.

Turning to the Company's proposed public fire protection rates, fire protection service requires the maintenance of adequate capacity and pressure to deliver large volumes of water at irregular intervals. In order to take this cost causation into account, fire protection rates are predominantly fixed charges. D.P.U. 95-118, at 180-181 (1996). The Department's long-standing policy has been to consider public fire protection service as a distinct class, to be billed to the municipality. Whitinsville Water Company, D.P.U. 18070, at 4-5 (1974). In this case, however, Plymouth has imposed a permitting condition that it would not accept responsibility for any fire protection charges (Exh. DTE 2-4). Because of the demand-based cost causation features associated with fire protection service, the Company's ratepayers would see little, if any, overall difference in their bills whether public fire protection is billed as a separate charge to metered service customers, or embedded as a component of the metered service rates. Moreover, separate billing for fire protection service ensures against cross-subsidization of fire protection service, and provides customers with appropriate price signals relative to the need for fire protection services. Accordingly, the Department accepts the

Company's proposal to separately bill customers for public fire protection service.[24] Pinehills is directed to adjust its proposed public fire protection rates consistent with the revenue requirement granted in this Order.

With respect to the Company's private fire protection service, the Department has accepted the use of equivalent capacity units to allocate the overall fire service revenue requirement between public and private fire service. D.P.U. 95-118, at 177-181 (1996). Because the demand for private fire protection is largely at the discretion of individual customers, the Company's projection of private fire protection customers is subject to a great degree of speculation (Tr. at 55-56).[25] The Department finds that Pinehills has made a reasonable effort to develop a conservative estimate of private fire protection customers. Additionally, Pinehills' allocation method used to assign costs between public and private fire protection service is consistent with Department practice. Therefore, the Department finds that the Company's private fire protection service charges have been reasonably determined and allocated. Accordingly, the Department accepts the Company's proposed private fire service

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[24] In Assabet Water Company, D.P.U. 1415, at 13-14 (1983), the Department directed the company to include the costs associated with fire protection service in its metered rate. However, unlike the situation here, Assabet Water Company was not able to quantify its public fire protection costs.

[25] This degree of speculation affects the Company's proposed equivalent capacity units, and therefore its proposed private fire protection rates. Pinehills's cost analysis indicates private fire service charges of $780.61 per quarter versus its proposed public fire service rates of $160 per year (Exh. PWC-5, exh. SBA-1, Sch. 3, at 2). As noted above, the Company's public fire protection service has been allocated on the basis on the number of total customers, versus the more customary use of equivalent capacity units. Had Pinehills allocated all of its fire protection charges on the basis of equivalent capacity units, the annual public fire protection charge would have been $1,395.50 per equivalent capacity unit, in comparison to $1,387.76 for private fire protection (id.).

allocation method. Pinehills is directed to adjust its proposed private fire protection rates consistent with the revenue requirement granted in this Order.

VII. TERMS AND CONDITIONS

A company's terms and conditions constitute a part of its tariffed rates to which customers should be able to refer for an accurate description of their rights and obligations. It is the Department's policy to review the terms and conditions of a company in conjunction with a rate investigation in order to ensure that the terms and conditions accurately describe Department regulations. D.P.U. 87-228, at 33 (1988).

The Company has provided its proposed terms and conditions of service (Exh. PWC-1, M.D.T.E. No. 1). As part of its terms and conditions, the Company has proposed a number of ancillary charges, including a new customer connection charge which varies by meter size, service termination/restoration charges of $25 during business hours and $165 outside of business hours, meter testing fees of $50 and $75 (depending on meter size), a returned check fee of $25, an after-hours callout fee of $165, and cross-connection testing fees of $75 for the fist device tested, and $35 for each device thereafter (Exh. PWC-1, M.D.T.E. No. 1, Original Sheets 11-12).

Upon review, the Department finds that the terms and conditions fairly reflect the billing and termination procedures of the Department found in 220 C.M.R. § 25 et seq., and describe the Department's procedures for appeal in language that should be understandable to all customers. See D.P.U. 89-67, at 28. Accordingly, the Department approves the Company's proposed terms and conditions of service.

With respect to the fees proposed by Pinehills, the Department has reviewed the Company's calculations and assumptions, as well as fees charged by other regulated water

utilities (Exh. DTE 1-9; Massachusetts-American Water Company M.D.T.E. No. 1, Second Revised Sheet No. 6). The Department finds that the proposed fees incorporate the costs likely to be incurred by the Company for providing these services, and are therefore reasonable. D.T.E. 95-118, at 84 (1996); D.P.U. 89-67, at 4-5 (1989). Accordingly, the Department approves the Company's proposed service fees.

VIII. ADEQUACY OF THE DISTRIBUTION SYSTEM

As part of this proceeding, Pinehills has sought any and all Department approvals that may be required by G.L. c. 165, § 1A concerning the adequacy of the Company's distribution system (Exh. PWC-2, at 13; Company Brief at 3). General Laws c. 165, § 1A provides as follows:

> No corporation or company shall engage in the distribution or sale of water in the [C]ommonwealth through its pipes and mains unless written approval of the adequacy of its distribution system has first been obtained from the [D]epartment, and unless proof of compliance with chapter one hundred and eleven has been furnished to the [D]epartment.

Pinehills has submitted evidence that its distribution system has been constructed in accordance with plans and specifications approved by the DEP pursuant to both G.L. c. 111, § 17 and DEP's regulations (Exh. PWC-3, Tab D, letter from DEP dated September 27, 2000). The Department recognizes DEP's concurrent jurisdiction over the approval of water distribution systems pursuant to G.L. c. 111, § 17. Nevertheless, the Department is obligated to exercise its statutory authority independent from that of DEP to ensure the provision of safe, reliable service to Pinehills' customers. G.L. c. 165, § 4; see also Astro Water Supply, D.T.E. 01-35, Interim Order at 5 (March 26, 2001).

The Department has examined the Company's supporting information, including construction plans, engineering reports, and correspondence with DEP. Department staff have

also conducted a physical inspection of Pinehills' system. Based on our review, the Department finds that the Company's distribution system has been constructed in accordance with generally-accepted water engineering standards,[26] and has adequate capacity to meet present and future system demands (Exhs. PWC-3, Tab D; DTE 1-20; DTE 1-22). Moreover, Pinehills has demonstrated that it has worked closely with DEP during the construction and review process, and has satisfied the permit conditions imposed by DEP (Exh. PWC-3, Tab D). Accordingly, the Department approves of the adequacy of Pinehills' distribution system for purposes of G.L. c. 165, § 1A.

IX. ORDER

Accordingly, after due notice, hearing and consideration, it is

ORDERED: That the rates and charges set forth in M.D.T.E. Nos. 1 and 2, filed with the Department on April 13, 2001 by Pinehills Water Company be and hereby are disallowed; and it is

FURTHER ORDERED: That Pinehills Water Company may file new schedules of rates and charges designed to produce total annual water revenues of $2,282,681 under the assumption that The Pinehills has been fully built-out; and it is

FURTHER ORDERED: That Pinehills Water Company renegotiate its Facilities Lease Agreement so that the return on investment is equal to the overall rate of return as approved from time to time by the Department; and it is

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[26] See "2001 Guidelines and Policies for Public Water Suppliers," DEP (January 2001), incorporated by reference in Massachusetts Drinking Water Regulations, 310 C.M.R. § 22.04(1)(a).

FURTHER ORDERED: That Pinehills Water Company shall comply with all other orders and directives contained herein; and it is

FURTHER ORDERED: That the new rates shall apply to water consumed on or after the date of this Order, but, unless otherwise ordered by the Department, shall not become effective earlier than seven (7) days after they are filed with supporting data demonstrating that such rates comply with this Order.

By Order of the Department,

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James Connelly, Chairman

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W. Robert Keating, Commissioner

_____
Paul B. Vasington, Commissioner

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Eugene J. Sullivan, Jr. Commissioner

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Deirdre K. Manning, Commissioner

X. SCHEDULES

Appeals as to matters of law from any final decision, order or ruling of the Commission may be taken to the Supreme Judicial Court by an aggrieved party in interest by the filing of a written petition praying that the Order of the Commission be modified or set aside in whole or in part.

Such petition for appeal shall be filed with the Secretary of the Commission within twenty days after the date of service of the decision, order or ruling of the Commission, or within such further time as the Commission may allow upon request filed prior to the expiration of twenty days after the date of service of said decision, order or ruling. Within ten days after such petition has been filed, the appealing party shall enter the appeal in the Supreme Judicial Court sitting in Suffolk County by filing a copy thereof with the Clerk of said Court. (Sec. 5, Chapter 25, G.L. Ter. Ed., as most recently amended by Chapter 485 of the Acts of 1971).